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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,617	07/27/2006	Reinhard Leigraf	VOI0368.US	9960
41863 TAYLOR & AUST, P.C. P.O. Box 560 142. S Main Street Avilla, IN 46710	7590 05/12/2010			
EXAMINER				
TRAN, BINH X				
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1713				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/587,617

**Applicant(s)**

LEIGRAF ET AL.

**Examiner**

BINH X. TRAN

**Art Unit**

1713

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-30 and 32-52 is/are pending in the application.
- 4a) Of the above claim(s) 39-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-30, 32-38 and 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 32 "prior to a coating step" is indefinite because it is unclear from the claim whether "a coating step" in claim 32 is refer to the same "coating step" in claim 26 or not.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 26-29, 32-34, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korhonen (WO 02/103109 A1) in view of Bobsein et al. (US 2003/0178165 A1).

Respect to claim 26, Korhonen discloses a method for the production of a wood-free coating, matt or semi-matt paper web (W), comprising the steps of:

precalendering the paper web using at least one apparatus (500 and/or 800) for precalendering (abstract, Fig 4, page 23 lines 1-10);

coating at least one side of the paper web (W) by using at least one apparatus (200, or 600) for applying one of a liquid or pasty application medium (abstract, Page 12 lines 11-39);

drying the paper web using at least one apparatus (400 or 710) for drying the paper web thereby create a wood-free coating with a roughness level between 2.2-3.4  $\mu\text{m}$  (PPS) (See pages 4 lines 5-15; page 18 line 18-31; page 22 lines 16-28, Fig 6, pages 23 lines 13-30).

Korhonen fail to disclose that the roughness level and a gloss value in combination having values that lie within a triangularly shaped region defined by a first point, a second point, and a third point, said first point being 0.8  $\mu\text{m}$  roughness level and 3% gloss value, said second point being 0.8  $\mu\text{m}$  roughness level and 35% gloss value, said third point being 3.9  $\mu\text{m}$  roughness level and 3% gloss value. However, Korhonen clearly disclose a roughness level between 2.2-3.4  $\mu\text{m}$  (PPS) (within applicant's

roughness value). Bobsein discloses to measure the sheet glass using TAPPI 75 ° (paragraph 0054). Bobsein further discloses to the sheet gloss of the coating is in the range of 4.2 to 19.9% (Table 2) or 19.5% to 19.9% (Table 4), or 4.7 to 15.9 % (Table 6), or 4.7 to 14.8% (See Table 2, Table 4, Table 6, and Table 9). These sheet gloss value of Bobsein in combination of Korhonen roughness level around 2.2 $\mu$ m (PPS) certainly would lie within a triangularly shaped region defined by a first point, a second point, and a third point, said first point being 0.8  $\mu$ m roughness level and 3% gloss value, said second point being 0.8  $\mu$ m roughness level and 35% gloss value, said third point being 3.9  $\mu$ m roughness level and 3% gloss value. It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Korhonen in view of Bobsein by performing routine experiment to obtain optimal gloss value because it has been held that determination of workable ranges in not considered inventive.

Respect to claim 27, Korhonen discloses the step of coating the paper web (W) on the first side by way of an other apparatus for applying one of a liquid pasty application medium prior to the precalendering (500 or 800) (See Fig 1, page 16 lines 25 to page 17 line 12, page 22 lines 6-15). Respect to claim 28, Korhonen discloses the coating apparatus s one of a film coating device and a curtain coating device (page 12 lines 10-16, pages 22 lines 7-15)

Respect to claim 29, Korhonen discloses the coating step is carried ounce on both side of the paper web prior to said precalendering (500 or 800), said at least one apparatus for applying one of liquid (include water) and pasty application medium being a film coating device (Fig 1, page 16 lines 25 to page 17 line 12, page 22 lines 6-15).

Respect to claims 32 and 37, Korhonen discloses the step of conveying the paper web through at least one film press (300) prior to a coating step (600) (abstract) or prior to said precalendering step (abstract).

Respect to claim 33, Korhonen disclose the apparatus for precalendering is a soft calender with at least one nip (pages 13 lines 22-25, col. 14 lines 4-10, page 20 lines 15-20); a shoe calender with at least one nip and a smoothing unit (pages 20 lines 15-20, page 21 lines 1-22, fig 4). Respect to claim 34, Korhonen discloses the coating apparatus includes a first apparatus that coats a first side of the paper web, the apparatus is curtain coating device (page 12 lines 10-16, pages 22 lines 7-15).

5. Claims 30, 35, 36, 38, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korhonen and Bobsein as applied to claims 26-29, 32-34, 37 above, and further in view of Johnson et al. (US 2002/0117277 A1).

Respect to claims 30 and 35, Korhonen and Bobsein fail to disclose the apparatus for applying one of liquid and pasty application medium includes a first apparatus and a second apparatus being a curtain coating device (claim 30); or include a second apparatus that coats a second side of the paper web, the second apparatus being a curtain coating device (claim 35). However, Korhonen clearly discloses to use plurality of coating device on both side of the web (Figure 4, page 22 lines 6-15). Korhonen further disclose it is possible to use curtain coating process (page 12 lines 10-15). Johnson teaches to use plurality of curtain coaters to coat both side of the web (paragraph 0026). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify because equivalent and substitution of one for the other

would produce an expected result. Further, Johnson's process would improve wear resistant of the paper (paragraph 0007).

Respect to claim 36, Korhonen discloses the step of drying the paper web after the paper both side of the paper web is coated (abstract).

Respect to claim 38, Johnson disclose that the paper web is not conveyed through any smoothing apparatus nor the paper is conveyed through any calendering apparatus after the paper web has been coated by at least one apparatus for applying one of liquid and pasty application medium (paper slurry) (See Fig 1, Fig 3). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Korhonen and Bobsein in view of Johnson because it will improve wear resistant of the paper.

Regarding to claim 52, Korhonen discloses a method for the production of a wood-free coating, matt or semi-matt paper web (W), comprising the steps of:

precalendering the paper web using at least one apparatus (500 and/or 800) for precalendering (abstract, Fig 4, page 23 lines 1-10);

coating the paper web (W) after the precalendering step on at least one side of the paper web by using at least one apparatus (200, or 600) for applying one of a liquid or pasty application medium (abstract, Page 12 lines 11-39);

drying the paper web using at least one apparatus (400 or 710) for drying the paper web, after the paper web has been passed through at least one device for the application of liquid or pasty application medium in a running direction of the paper web,

thereby create a wood-free coating with a roughness level between 2.2-3.4  $\mu\text{m}$  (PPS) (See pages 4 lines 5-15; page 18 line 18-31; page 22 lines 16-28, Fig 6, pages 23 lines 13-30).

Korhonen fails to disclose the gloss value in the range from 3-35% TAPPI 75 °. Bobsein discloses to measure the sheet gloss using TAPPI 75 ° (paragraph 0054). Bobsein further discloses to the sheet gloss of the coating is in the range of 4.2 to 19.9% (Table 2) or 19.5% to 19.9% (Table 4), or 4.7 to 15.9 % (Table 6), or 4.7 to 14.8% (See Table 2, Table 4, Table 6, and Table 9). Bobsein also discloses the sheet gloss value of around 30% including 30.74% or 31.72% or 29.34 %, etc (See Table 3, Table 4, and Table 7). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Korhonen in view of Bobsein by performing routine experiment to obtain optimal gloss value because it has been held that determination of workable ranges in not considered inventive.

Regarding to claim 52, Korhonen and Bobsein fail to explicitly disclose that the paper web is no longer led through any further smoothing or calendaring device. Johnson disclose that the paper web is not conveyed through any smoothing apparatus nor the paper is conveyed through any calendaring apparatus after the paper web has been coated by at least one apparatus for applying one of liquid and pasty application medium (paper slurry) (See Fig 1, Fig 3). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Korhonen and Bobsein in view of Johnson because it will improve wear resistant of the paper.

***Response to Arguments***



6. Regarding to previous rejection of claims 27, 31, 32 and 36 under 35 USC 112, 2<sup>nd</sup> paragraph rejection, the applicants state "Applicants have amended claims 27, 32, and 36 and canceled claim 31. The amending of claims 27, 32, and 36 were undertaken to eliminate confusion noted by the Examiner in the Office Action" (emphasis added). The examiner strongly disagrees with this statement. The examiner acknowledged that applicants amended claims 27, 36 and cancelled claim 31. However, the applicants fail to amend claim 32 in the amendment filed on 03-12-2010. It is noted that claim 32 has a "(Previously Presented)" claim identifier. The applicants further fail to point out the supposed error in the previous ground of rejection under 35 USC 112, 2<sup>nd</sup> paragraph. Thus, the examiner still maintains the previous ground of rejection under 35 USC 11, 2<sup>nd</sup> paragraph for claim 32.

7. Regarding previous rejection of claims 26-29, 32-34, 37 under 35 USC 103(a) rejections, the applicants state "Korhonen discloses a method for the manufacture of LWCR printing paper that is coated once and has a PPS-ST roughness below 3.5  $\mu\text{m}$ . Bobsein, et al. disclose a paper having a sheet gloss of approximately 30%. Applicants have amended the claim to specifically claim a combination of quality and roughness that lies within a triangular range as discussed in page 9 of the specification as originally filed and as illustrated in Fig. 4". According to applicants, Korhonen, Bobsein, et al., and any of the other cited references, alone in combination, fail to teach, disclose, or suggest a roughness level and a gloss value in combination having values that lie within a triangularly shaped region defined by a first point, a second point, and a third point, the first point being 0.8  $\mu\text{m}$  roughness level and 3% gloss value, the second point being

0.8 pm roughness level and 35% gloss value, and the third point being 3.9 pm roughness level and 3% gloss value, as recited in claim 26". The examiner disagrees. The examiner acknowledges that Bobsein discloses the sheet gloss of approximately 30% in Table 3. However, Bobsein also discloses it is possible to have a sheet gloss between 4.2-19.9% in Table 2, or 19.5-19.9% in Table 4; or 4.7 to 15.9% in Table 6, or 4.7 to 14.8 % in Table 9. These sheet gloss value of Bobsein in Table 2, Table 4 or Table 6 or Table 9 in combination of the roughness value of 2.2  $\mu\text{m}$  (PPS) of Korhonen certainly would lie within a triangular shaped region defined by applicants. It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Korhonen in view of Bobsein by perform routine experiment to obtain optimal gloss value because it has been held that determination of workable ranges in not considered inventive. Thus, the examiner still maintains the previous 35 USC 103(a) rejections.

A new ground of rejection was set forth to discuss applicant's new claim 53.

### ***Conclusion***

**8. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BINH X. TRAN whose telephone number is (571)272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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